<table>
<thead>
<tr>
<th>Local Habitats</th>
<th>Matter Matters</th>
<th>Electricity</th>
<th>Sounds Like a Racket!</th>
<th>All Things Food</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Topic Link- The Romans</strong></td>
<td><strong>Topic Link- The Thames</strong></td>
<td><strong>Topic Link- London</strong></td>
<td><strong>Topic Link- Laws and Lawmakers</strong></td>
<td><strong>Topic Link- The Normans</strong></td>
</tr>
<tr>
<td>- Identify and name a variety of living things (plants and animals) in the local and wider environment and group them</td>
<td>- Solids, Liquids and Gases</td>
<td>- Identify common appliances that run on electricity.</td>
<td>- Sources</td>
<td>- Digestive System</td>
</tr>
<tr>
<td>- Recognise that environments can change and can pose dangers</td>
<td>- Heating and cooling (no baking, etc.)</td>
<td>- Construct simple circuits including switches</td>
<td>- Vibration</td>
<td>- Teeth</td>
</tr>
<tr>
<td><strong>Key outcomes for this unit, children to be able to:</strong></td>
<td>- Evaporation and condensation</td>
<td>- Common conductors and insulators</td>
<td>- Loud and faint</td>
<td>- Food chains</td>
</tr>
<tr>
<td>- Recognise that living things can be grouped in a variety of ways Biology 4.1.1</td>
<td></td>
<td>- Alternative sources of energy</td>
<td>- Pitch</td>
<td>- Predators and prey</td>
</tr>
<tr>
<td>- Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment Biology 4.1.2</td>
<td></td>
<td><strong>Key outcomes for this unit, children to be able to:</strong></td>
<td>- Volume</td>
<td><strong>WOW: Children to eat a piece of fruit at the beginning of the day with a view to tracking its journey through the body. Use disclosing tablets to show how teeth are affected by food and plaque.</strong></td>
</tr>
<tr>
<td>- Recognise that environments can change and that this can sometimes pose dangers to living things. Biology 4.2.1</td>
<td></td>
<td>- identify how sounds are made, associating some of them with something vibrating.</td>
<td>- Sound travelling</td>
<td><strong>Key outcomes for this unit, children to be able to:</strong></td>
</tr>
</tbody>
</table>

**Key Learning Points:**
- Which wild flowers will we find within a Km of our school?
- How would Georgia O’Keeffe have painted these flowers?
- Would dinosaurs have roamed around your locality in the past?
- Why did dinosaurs die out?
- Why are there large wild animals like the tiger in danger of extinction today?
- Which birds can we see out of our classroom window?

**Reflection:** Can you create a documentary about saving a species of your choice and to encourage more birds to visit our school?

**WOW: Create different shapes with clay or plasticine and put water into the mould and freeze it.**

**Key Learning Points:**
- How can you classify solids, liquids and gases?
- How do we measure temperature and how does temperature vary during the day and across the world?
- How can water be a solid, liquid and gas?
- Which other materials change state when they are heated or cooled?
- Where do puddles on the playground disappear to?
- Why do windows sometimes steam up?
- How can you create a dance that shows the three states of water?

**WOW: Children to spend a full day without access to electricity. This to be organised and liaised with home.**

**Key Learning Points:**
- What caused that ‘racket’?
- How do your ears work?
- What do we mean by the pitch and volume of the sound?
- Does sound have the same intensity the further away you go from the source?
- Could you be the next X Factor star?
- What do we know about the way telephones work and how have they changed over time?

**Reflection:** A performance in the style of an X Factor talent show

**Key outcomes for this unit, children to be able to:**
- describe the simple functions of the basic parts of the digestive system in humans. Biology 4.5.1
- identify the different types of teeth in humans and their simple functions. Biology 4.5.2
- construct and interpret a variety of food chains, identifying producers, predators and prey. Biology 4.5.3
### Living Things & their Habitat

**Key Skills**  
Children to:
- Take measurements using different equipment and units of measure and record what they have found in a range of ways.
- Make accurate measurements using standard units.
- Explain their findings in different ways (display, presentation, and writing).
- Find any patterns in their evidence or measurements.
- Make a prediction based on something they have found out.
- Record and present what they have found using scientific language, drawings, labeled diagrams, bar charts and tables.
- Use a classification key to group a variety of living things (plants, vertebrates, invertebrates)
- Compare the classification of common plants and animals to living things found in other places (under the sea, prehistoric)
- Name and group a variety of living things based on feeding patterns. (producer, consumer, predator, prey, herbivore, carnivore, omnivore)

**Challenge**  
- Use a graph or diagram to answer scientific questions.

### States of Matter

**Key Skills**  
Children to:
- Set up a simple fair test to make comparisons.
- Plan a fair test and isolate variables and explain why it was fair and explain which variables have been isolated.
- Suggest improvements and predictions.
- Decide which information needs to be collected and decide which is the best way for collecting it.
- Use their findings to draw a simple conclusion.
- Compare and group materials based on their states of matter, ie, liquid, solid or gas.
- Explain what happens to materials when they are heated or cooled.
- Measure the temperature at which different materials change state.
- Use measurements to explain changes to the state of water.
- Link changes of state to the water cycle.

**Challenge**  
- Explain what happens over time to materials such as puddles on the playground or washing hanging on a line.

### Electricity

**Key Skills**  
Children to:
- Set up a simple fair test to make comparisons.
- Plan a fair test and isolate variables and explain why it was fair and explain which variables have been isolated.
- Suggest improvements and predictions.
- Decide which information needs to be collected and decide which is the best way for collecting it.
- Use their findings to draw a simple conclusion.
- Explain how electricity is useful to us.
- Construct a simple circuit.
- Explain what a conductor is and test materials for conductivity.
- Explain closed and open circuits.
- Construct a circuit with a switch.
- Recognise some common conductors and insulators.

**Challenge**  
- Work out which metals can be used to connect across a gap in a circuit.

### Sound

- What no TV or play-station!: what shall we do?
- Could you create a meal that has not required electricity to prepare it?
- How is electricity generated and what do we mean by alternative sources?

**Key Skills**  
Children to:
- Take measurements using different equipment and units of measure and record what they have found in a range of ways.
- Make accurate measurements using standard units.
- Explain their findings in different ways (display, presentation, writing).
- Find any patterns in their evidence or measurements.
- Make a prediction based on something they have found out.
- Record and present what they have found using scientific language, drawings, labeled diagrams, bar charts and tables.

**Challenge**  
- Report findings from investigations through written explanations and conclusions.

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<tr>
<th>Key Skills</th>
<th>Challenges</th>
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<td>Children to:</td>
<td>Explain their findings in different ways (display, presentation, writing)</td>
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<tr>
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<td>Make a prediction based on something they have found out.</td>
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<tr>
<td></td>
<td>Identify the teeth of herbivores and carnivores.</td>
</tr>
<tr>
<td></td>
<td>Identify the simple function of different types of human teeth.</td>
</tr>
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<td></td>
<td>Record and present what they have found using scientific language, drawings, labeled diagrams, bar charts and tables.</td>
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### Animals (including humans)

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<tr>
<th>Trips and Experiences</th>
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<tr>
<td>Visit to natural history museum in Oxford</td>
<td>Visit to Cadbury World - Journey of Chocolate</td>
<td>Science Museum</td>
<td>Visit to a radio station or recording studio</td>
<td>Life caravan</td>
</tr>
<tr>
<td>Think Tank</td>
<td>Camping on school Field - no use of electricity (sleep under the stars)</td>
<td>Visiting musician</td>
<td>Trip to Symphony Hall</td>
<td></td>
</tr>
</tbody>
</table>

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**Trip to Symphony Hall**

**Visiting musician**

**Challenge**  
- Explain what happens over time to materials such as puddles on the playground or washing hanging on a line.

**Challenge**  
- Explain how pitch and volume can be changed in a variety of ways.
### Living Things & their Habitat

<table>
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<tr>
<th>Other ideas for trips and experiences</th>
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<tr>
<td>Children to create an animal suited to an environment – Tinga Tinga tales</td>
<td></td>
<td></td>
<td></td>
<td>Villa Vitality, Visit from local dentist Look at x-rays of teeth Camera to show journey of food</td>
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